

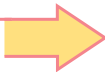
73 Introduced Species



Introduced, non-native, exotic, and non-indigenous are all words used to describe species that humans have introduced outside of the species' normal range. The Nile perch is an **introduced species** that was placed deliberately into Lake Victoria. In other cases, the introduction of a new species into a new environment is accidental. Consider the case of the zebra mussel, which is named for the black and white stripes found on its shell. It was accidentally introduced into the United States in the 1980s and it is now estimated to cause up to \$5 billion dollars of damage each year!



CHALLENGE



What effect can an introduced species have on an environment?
What, if anything, should be done to control introduced species?

MATERIALS



For the class

books, magazines, CD-ROMs, Internet access, etc.



For each student

1 Student Sheet 73.1, "Introduced Species Research"

PROCEDURE



1. Read about the introduced species described on the following pages. As directed by your teacher, decide which one species your group will research.
2. Over the next few days or weeks, find information on this species from books, magazines, CD-ROMs, the Internet, and/or interviews. You can also go to the *Issues and Life Science* page of the SEPUP website to link to sites with more information on species mentioned in this activity.
3. Use this information to complete Student Sheet 73.1, "Introduced Species Research." You should provide the following:
 - common and scientific name of your species
 - its native and current range; its relationship to and effect on people
 - its effect on new ecosystem(s)
 - its place in a foodweb
 - the reasons for its success
 - issues related to its future growth or spread.

Later in this unit, you will use your research to create a class presentation.

EXTENSION

Visit a local greenhouse or botanical garden. Look at the labels of ornamental plants used in landscaping. Where did these plants originally come from? Is the introduction of these species considered to be good or bad?

Kudzu Brings Down Power Lines!

Kudzu (KUD-zoo), sometimes referred to as “the vine that ate the South,” has finally pushed local patience to the limit. Properly called *Pueraria lobata*, it was first introduced in the 1920s to the southern United States as food for farm animals and to reduce soil erosion. Today, this fast-growing vine from Japan has overgrown entire forests and choked local ecosystems. Last week, the weight of kudzu vines pulled down power lines, causing a two-day power outage. Mayor Lam has called for control measures. All community members are invited to

a town council meeting to consider what should be done to control this destructive vine.



Response to Tiger Mosquitoes Raises Questions

The public outcry over the worsening problem with the tiger mosquito (*Aedes albopictus*) continues. In response, the city has



begun nighttime spraying of insecticide. Jesse Butler, principal of the Little Town Pre-school, said, “How can the city be allowed to spray poison on the backyards where children play?” City spokesperson Kate O’Neil told reporters that the insecticide is harmless to people. “Tiger mosquitoes are very aggressive. They are much worse than the native mosquitoes. Apart from the nuisance, tiger mosquitoes can spread diseases such as yellow fever. We have to take action!” O’Neil invites interested residents to attend the Camford Mosquito Abatement Board presentation on the tiger mosquito problem and possible solutions.

Nutria Hunting on State Marshes?

Ecologists from City University are considering teaming with local hunters in a surprise move to reduce the population of nutria (NEW-tree-uh) in state marshes. Nutria (*Myocastor coypus*) are large, beaver-like rodents whose burrows and voracious grazing are causing serious damage to marshes.

Ecologist Charlie Desmond told reporters that nutria are native to South Amer-

ica. They were brought to North America for their fur. When they escaped into the wild, their population exploded. "If we don't act soon, we could lose our marshlands in just a few years," he cautioned. Duck hunters, bird watchers, sport fishers, and hikers are pressuring the state legislature to come up with a solution. Nutria hunting is one option being seriously explored.



Aquarium Plant Turns Out to Be Worst Weed



You may have seen this aquatic plant sold in small bunches at aquarium stores. It's a popular plant because goldfish like swimming between its stems. But when aquariums are dumped out into lakes, ponds, or rivers, hydrilla (hie-DRILL-uh) can quickly grow into a dense mat that chokes out other vegetation. This change of the environment is dramatic for native animals and plants. *Hydrilla verticillata*, as it is known scientifically, can clog up city water intake valves and get tangled in boat propellers. "We used to have the best swimming hole down by the bridge," said Rita Aziz, a 7th grader at Junior Middle School. "Now it's filled with this gross weed. The last time I swam there, I got tangled in it. It was scary. I would really like to find a way to do something about it."

Cut Down Trees to Protect Them? Agency Advises on Longhorn Beetle Threat

When Keesha Murray, age 3, was injured by a falling branch in Tot Play Park, local neighborhoods woke up to the threat of the Asian longhorn beetle. Her father, Toby Murray, said that Keesha had played under the big maple tree many times. Under the attack of the Asian longhorn beetle, the tree had recently died, which led to the loss of the tree limb. "Keesha was scratched up and scared. We were lucky it wasn't worse," he said.

Shade trees all over the city have been dying due to the recent invasion of this wood-boring beetle from Japan, known scientifically

as *Anoplophora glabripennis*. The beetle larvae are very hard to kill. One suggestion is to cut down all trees within city parks to prevent the beetle from spreading.



A Landscape Beauty Is Taking Over

What is the link between landscaping your yard and the recent reports that local marsh species are declining? Purple loose-



strife (*Lythrum salicaria*), whose magenta flowers are admired by gardeners, is the weed to blame. It was introduced from Europe as a medicinal herb in the early 1800s and is still sold today as a landscaping plant. According to the Fish and Wildlife Service ecologist Johanna Brown, "It totally takes over an area, crowding out native species. It's really devastating for fragile marsh ecosystems." Brian Van Horn, a teacher at Middleton Junior High, is also concerned. "It's a tough plant to get rid of and killing it can damage the marshes even more." A meeting at Middleton Junior High will be held to discuss this issue.

Farmers Rally to Scare Off Starlings

The recent outbreak of hog cholera may be related to starling (*Sturnus vulgaris*) droppings getting into pig food. Carol Polsky, a pig farmer in Poseyville, encouraged local farmers to work together to help get rid of the birds. "In addition to spreading disease, those birds eat crops, seeds, and animal feed. A flock of starlings will eat just about anything and they poop everywhere. That spreads disease to other animals, not just pigs," Polsky told reporters.



Many control options are available, according to Dr. Tony Caro of the Agricultural Sciences Board. Dr. Caro commented, "In 1891, 60 starlings were released in New York and now they are the most common bird in America!" But

a representative of the local nature society told reporters that the latest annual survey showed that starling populations had dropped since the previous year. Dr. Caro will be speaking at the next meeting of the County Farm Association, where control measures for starlings will be discussed.

Brown Snake Problem Bites Guam

Guam, a tiny, tropical island, is a U.S. territory with a problem. People have been bitten. Bird, bat, and lizard populations have declined. The culprit? The brown tree snake (*Boiga irregularis*) from New Guinea.

After baby Oscar Gonzalez was bitten by a brown tree snake, local people were spurred to action. "Most of us know about them. Those snakes climb the power poles and short out electricity on the island several times a week," Nicki DeLeon, a long-time resident of Guam, told reporters. "Back in the 1960s and even the 1970s, the jungle was full of birds singing. We used to see bats and little lizards running around. They're not so easy to find now."

Scientists are working to find ways to control the snake before the last of the

unique island species disappear forever. Dr. Sheila Dutt, a researcher with Eco-Save International, said, "As well as helping with snake control on Guam, we are desperate to prevent this snake from hitching a ride in air cargo. I don't even want to think of the effect this snake could have in other parts of the United States."

